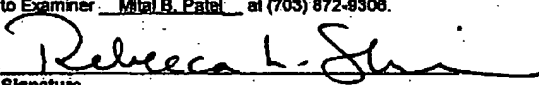


PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**RECEIVED**  
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JUL 15 2005

Applicants: Andrew Capon, David K. Friday, and David W. Pike  
For: MULTI-STAGE RESPIRATOR FILTER WITH TIM FILTER OPTION  
Serial No.: 10/604,497 Examiner: Mital B. Patel  
Filed: July 25, 2003 Group Art Unit: 3743  
Atty. Docket: 71619-0006 Confirmation No: 1496

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))	
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Commissioner for Patents  
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**REPLY BRIEF**

The Examiner's Answer in the above-identified matter raises a number of new issues which warrant this reply by Appellants. This brief will not reiterate any arguments of the Appeal Brief but will only respond to the new issues raised by the Examiner's Answer. The heading below refer to the headings in the Examiner's Answer.

**(8) EVIDENCE RELIED UPON**

On pages 2 and 3 of the Examiner's Answer, the Examiner lists the evidence relied upon in the rejection of claim under Appeal. The Examiner cites three prior art references, all of which are of record. The Examiner then sets forth the following statement:

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"It should be noted that the evidence supplied by the Appellant was submitted on 12/6/004 which was after the mailing date of the Final Rejection which was on 10/4/04 but before the filing date of the Notice of Appeal which was on 1/4/05."

It is not clear as to the significance of this statement. The Examiner appears to be referring to the Declaration under 37 C.F.R. § 1.132 of David Pike (the Pike Declaration) although the Answer does not specifically refer to this document. Appellants know of no other evidence other than the Pike Declaration and the attachments to the Declaration that were filed on December 6, 2004. It is not clear whether the Examiner has relied on this Declaration or whether she is simply raising an issue as to whether the Declaration is actually in evidence. The Examiner has not asserted that the Pike Declaration is not in evidence and indeed she could not because the Examiner entered the Pike Declaration in the communication mailed February 23, 2005. The Examiner's above comment with respect to the Pike Declaration should be ignored because the time of submission of the Declaration has no significance to the Appeal in view of the fact that the Declaration was admitted to evidence by the Examiner.

#### (10) GROUNDS OF REJECTION

In paragraph 4, on page 5, the Examiner, for the first time, makes the representation that Klusewitz et al. '549 teaches a filter canister assembly wherein the third filter medium is a particulate filter and an adsorbent filter, citing column 2, lines 54-60 and column 3, lines 45-51. These passages describe the prefilter pad to in the form of a filtering material, such as cotton or loosely compacted paper. These materials are described as being particulate filters and not adsorbent filters. The Examiner's characterization of felt or cotton as adsorbent filter is without support in Klusewitz et al. and is without any scientific support. There is no evidence in the record that cotton or paper form adsorbent filters.

In paragraph 6, that spans pages 5 and 6 of the Examiner's Answer, the Examiner represents that the third filter medium 8, 9 is adapted to boost the capability of the first and second filter media to filter TIMs from contaminated air, citing column 3, lines 18-25 and

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column 3, lines 37-44 of Klusewitz et al. '549. Whereas the Examiner is correct that the third filter medium 8, 9 of Klusewitz et al. '549 does boost the capability of the primary filter, it does not boost the capability of the primary filter to filter TIMs from contaminated air. The Examiner's statement with respect to the filtration of TIMs by the third filter medium 8, 9 is without support in Klusewitz et al. '549, in the record and in scientific fact.

Neither cotton or paper would act by a process of adsorption with any beneficial effect. Cotton, in this context, would act as a crude particulate filter. Absorbent material such as cotton batting are notoriously used as absorbents since they absorb liquid. The process of absorption is very far removed from the process of adsorption in spite of the fact that there is only one letter difference between the two words.

#### (11) RESPONSE TO ARGUMENT

In paragraph 16, page 9 of the Examiner's Answer, the Examiner argues that the Klusewitz et al. '549 filter media 8 and 9 are adapted to filter toxic industrial materials because toxic industrial materials can include particulate materials and the Klusewitz et al. '549 prefilter is a particulate filter. Further, the Examiner argues in that paragraph that the National Institute of Justice Guide (NIJ Guide) defines TIM as a chemical other than a chemical warfare agent that may have harmful effects on humans and are used in a variety of settings such as manufacturing facilities, maintenance areas, and general storage areas. The Examiner then concludes that paint fumes to which the Klusewitz et al. '549 invention is directed is a toxic industrial material based on this passage.

The Examiner's logic is faulty. While it is true that TIMs are not warfare gases, it does not follow that all gases that are not warfare gases are therefore TIMs. That is like saying that a Chevrolet is not a Ford and it is an automobile that is manufactured in the United States, therefore, all automobiles that are not Fords and that are manufactured in the United States are Chevrolets. To say that TIMs are not warfare gases is a way of distinguishing them but it isn't a way of defining them. The NIJ Guide defines TIMs on page 10 attached as Exhibit C to the Pike 132 Declaration and reads as follows:

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A TIM is a *specific type* of industrial chemical i.e., one that has a  $LC_{50}$  value (lethal concentration for 50% of the population multiplied by exposure time) less than 100,000 mg-min/m<sup>3</sup> in any mammalian species and is produced in quantities exceeding 30 tons per year at one production facility. Although they are not as lethal as the highly toxic nerve agents, their ability to make a significant impact on the populace is assumed to be more related to the amount of chemical a terrorist can employ on the target(s) and less related to their lethality. None of these compounds are as highly toxic as the nerve agents, but they are produced in very large quantities (multi-ton) and are readily available; therefore, they pose a far greater threat than chemical agents. For instance, sulfuric acid is not as lethal as the nerve agents, but it is easier to disseminate large quantities of sulfuric acid because of the large amounts that are manufactured and transported every day. It is assumed that a balance is struck between the lethality of a material and the amount of materials produced worldwide. Materials such as the nerve agents are so lethal as to be in a special class of chemicals. (Emphasis added.)

For whatever reason, the Examiner has chosen to disregard this definition which appears in the same resource that the Examiner cites. The Examiner has chosen to disregard this clear definition of TIMs in her Answer.

In paragraph 17, of the Examiner's Answer, the Examiner argues in support of her rejection of claim 7 that the adsorbent filter of the Klusewitz et al. '549 reference is actually an adsorbent because the dictionary definition says so. In support of this rather circuitous argument, the Examiner has cited the Merriam-Webster Collegiate Dictionary 10<sup>th</sup> Edition and apparently quoted from this dictionary. Appellants point out initially that this dictionary is not a document which the Examiner listed in her Answer as a reference on which she relied. Further, this dictionary was not cited in any Office Action or any other document filed with the Patent Office. Further, the Examiner has not provided a copy of this document from which she cites. The Board is requested to strike paragraph 17 of the Examiner's Answer because it refers to a document that is not in evidence.

In the event that the Board chooses to give any credence to the Examiner's argument, Appellant submits with a copy of this Brief full copies of a dictionary definition from Webster's Dictionary that gives the full definition of the term "adsorbent" and the term "absorbent", which appear, respectively, on pages 16 and 5 of the dictionary document. These dictionary definitions

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dispute the Examiner's argument that an absorbent is an adsorbent and that the Klusewitz et al. '549 auxiliary filter can in any way serve as an adsorbent for the removal of toxic industrial gases.

Appellants submit that the enclosed dictionary document merely confirm what any freshman college chemistry student should know about the differences between an adsorbent and an absorbent. The fundamental difference between these two terms is the manner in which the particles are filtered: one by attracting molecules to a solid surface, for example, a gas is absorbed on the surface of a carbon particle, and the other by taking up substances within the body of the filter, like a sponge absorbs water. The Examiner is expected to have a level of competency above that of a freshman college chemistry student and her attempt to pervert a clear meaning of these technical terms should not be countenanced by the Board.

In paragraph 18, of the Examiner's Answer, the Examiner has confused the motivation to combine references with respect to claim 10 with the application of a combined reference teaching to the claims. The Examiner argues that it would be obvious to combine the Newton '173 patent with the Klusewitz '549 patent because Applicants claim 10 broadly recites contaminate gases are not limited to warfare gases. The breadth of the claim has nothing to do with motivation to combine references. The breadth of the claim is only measured against the subject matter of properly combined references. The propriety of combining the references must be judged on its own terms rather than when while looking at the claims. The Examiner's argument about the propriety of the combination of these two references is justified solely by recitations of the claims. In ordinary parlance, the Examiner's motivation for combining the references is called hindsight reconstruction of the claims.

Finally, in paragraph 19, the Examiner argues that an elliptical shape of the canister is not patentable because the particular configuration of the claimed filter was not found to be significant. Whether the configuration is significant or not is not the issue for patentability. The issue is whether it would have been obvious to make the elliptical shape. As Appellants have asserted, elliptical shape is more conformal to the shape of the face and this has a lower profile that avoids interference in the use of a respirator mask for a variety of warfare functions. The

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references simply do not disclose this concept.

In view of the forgoing, reversal of the Examiner on all grounds is respectfully respected.

Respectfully submitted,

ANDREW CAPON ET AL.

Dated: 7.15.05

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